

What is claimed is:

1. A base station apparatus comprising:

5 a directional transmission section that transmits packet data and a quality decision signal with a directivity;

a packet data generation section that adaptively modulates or codes said packet data based on quality information when said quality decision signal is transmitted with directivity; and

10 a control section that switches and controls directivities so that a directivity with which said packet data is transmitted matches a directivity with which said quality decision signal is transmitted.

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2. The base station apparatus according to claim 1, wherein said control section switches between directivities in the case where a predetermined time has elapsed when said packet data is transmitted.

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3. A communication terminal apparatus comprising:

25 a reception quality measuring section that measures reception quality in a directivity of a quality decision signal from said quality decision signal included in a received signal; and

a transmission control section that decides a switching timing at which directivities of packet data are switched based on directivity switching timing

information included in the received signal and transmits reception quality information indicating said reception quality at a timing other than a period from a time a predetermined time ahead of said switching timing to said  
5 switching timing.

4. A base station apparatus which communicates with the communication terminal apparatus according to claim 3, comprising:

10 a directional transmission section that transmits packet data and a quality decision signal with a directivity;

a packet data generation section that adaptively modulates or codes said packet data based on said quality  
15 information;

a transmission section that transmits said directivity switching timing information; and

a control section that performs such control as to switch between directivities with which said packet data  
20 is transmitted after transmitting said directivity switching timing information.

5. The communication terminal apparatus according to claim 3, further comprising a storage section that  
25 prestores reception quality measuring information for each directivity,

wherein said reception quality measuring section measures said reception quality using switched

directivity information included in the received signal which is the next directivity to be switched with which packet data is transmitted and said reception quality measuring information.

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6. The base station apparatus according to claim 4, wherein said transmission section transmits switched directivity information which is the next directivity to be switched with which packet data is transmitted to a party at the other end,

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said packet data generation section adaptively modulates or codes packet data based on said quality information in said switched directivity, and

said control section transmits said packet data with said switched directivity.

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7. A transmission method comprising:

a step of transmitting a quality decision signal for measuring reception quality at a party at the other end with a directivity;

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a step of adaptively modulating or coding packet data based on quality information in a directivity of said quality decision signal; and

a step of switching and controlling directivities so that a directivity with which said packet data is transmitted matches a directivity with which said quality decision signal is transmitted.

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8. A communication method comprising:

a step of a base station apparatus notifying  
switching timing for switching between directivities with  
which packet data is transmitted and directivity

5 information which is the next directivity to be switched  
with which said packet data is transmitted, a step of  
adaptively modulating or coding said packet data based  
on quality information included a received signal and  
a step of transmitting said packet data with a directivity;

10 and

a step of a communication terminal apparatus  
transmitting said quality information indicating  
reception quality at a timing other than a period from  
a time a predetermined time ahead of said switching timing  
15 to said switching timing and a step of measuring said  
reception quality using prestored reception quality  
measuring information to determine said reception quality  
and said directivity information.